4.13 VISUAL RESOURCES

Information contained in this section is based on the *SR-22/West Orange County Connection Visual Impact Assessment* and the *Visual Impact Assessment Reduced Build Alternative Addendum* (December 2000), and the *Visual Impact Assessment Reduced Build Alternative (Revised) Addendum* (December 2002) (under separate cover). This section analyzes the potential impacts and mitigation measures to visual quality that would occur from implementation of the State Route 22/West Orange County Connection project. Detailed information for the TSM/Expanded Bus Service, Full Build, and Reduced Build Alternatives can be found in the August 2001 DEIR/EIS. However, a summary is provided in this document.

The additional analyses in this section were the result of refined engineering, responding to comments received during the public comment period of the August 2001 DEIR/EIS, and/or additional planning efforts. During the public comment period of the DEIR/EIS, the Department received numerous comments from residents in the Community of Rossmoor as well as from residents in the City of Seal Beach. The residents from these areas were concerned with the potential visual impacts as a result of the implementation of the I-405/605 direct HOV connector. To address this issue, additional analyses were prepared to determine the impacts from the I-405/605 direct HOV connector. The findings for this analysis as well as discussions of visual impacts to other portions of the SR-22 corridor are discussed in this section. The comments and responses to comments are attached as Appendix A of this FEIS/EIR (Volumes II & III).

The I-405/605 HOV connector alignment presented in the DEIR/EIS was proposed over three existing facilities: the I-405 freeway, the connector from eastbound SR-22 to northbound I-405, and the connector from southbound I-405 to northbound I-605. The peak elevation of the alignment as shown in the August 2001 DEIR/EIS of the proposed connector structure occurred at approximately 29 meters high where the minimum vertical clearance is required over the existing southbound I-405 to northbound I-605 connector. During the public review period of the August 2001 DEIR/EIS, which included a 60-day public comment period and two Public Hearings, concerns from the Rossmoor residents arose regarding traffic noise, visual, air quality, and traffic issues. In an effort to address these concerns, several different design variations have been studied. Among them, one preferred design solution has been identified that reduces the height of the HOV connector by shifting the alignment of the proposed HOV connector southerly such that the revised alignment runs parallel between the eastbound SR-22 and the southbound I-605 to southbound I-405 connectors at the same elevations. The peak elevation of this alignment shown in the FEIS/EIR is approximately 22 meters high where the connector crosses over the eastbound SR-22 connector (approximately 700 meters east of the previously identified peak elevation point). See Figures 2.2-1a,b, & c for more detail on the I-405/605 HOV connector realignment.

Note, Appendix F in Volume IV of this FEIS/EIR includes different viewpoints for the additional analysis of the I-405/605 HOV connector, as well as the replacement of the Pearce Street pedestrian overcrossing.

4.13.1 Visual Impacts at Key Viewpoints

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Suburban Landscape Unit. Figures 4.13-1 and 4.13-2 include photos of existing conditions and proposed simulations of how the key viewpoints for the Suburban Landscape Unit would appear under the (Enhanced) Reduced Build Alternative. These photos are further studies of the Suburban Landscape Unit that take into account the residents near the proposed I-405/I-605 HOV connector as well as the Pearce Street pedestrian overcrossing. The viewers are almost exclusively residents, and most of them are homeowners. Residents are among the most sensitive viewers to visual quality change. At the Suburban Key Viewpoint, there would be some visible changes along the entire route.

One of the visible changes would be the modified proposed HOV connector at I-405/I-605 as well as at I-405/SR-22. The I-405/605 HOV connector shown in Figure 4.13-2 is the modified connector (see discussions above). The realigned I-405/605 HOV connector height is reduced by shifting the alignment of the proposed HOV connector southerly such that the revised alignment runs parallel between the eastbound SR-22 and the southbound I-605 to southbound I-405 connectors at the same elevations. The peak elevation of this

alignment shown in the FEIS/EIR is approximately 22 meters high where the connector crosses over the eastbound SR-22 connector (approximately 700 meters east of the previously identified peak elevation point).

The widening of SR-22 would cause few physical changes visible to the Suburban Landscape Unit. One visible change would be the Pearce Street pedestrian overcrossing across SR-22. The replacement Pearce Street pedestrian overcrossing proposed in this FEIS/EIR is ADA compliant, and would be approximately 110 meters and located east of the existing overcrossing. Since the facility is shifted east, there would be new views for those residents on the north and south side of SR-22 near the location of the replacement overcrossing. However, residents having views of the overcrossing at it's current location may lose view of it upon relocation further east on SR-22.

Another example of such a physical change along SR-22 would be the addition of soundwalls along the corridor. The HOV connector would have some impact to residents living next to the freeway due to the new views of the connector. As a whole, after project construction, vividness, intactness and unity are of moderate perceptual quality. With proper mitigation and enough right-of-way, the HOV connector may have a less than significant impact to the Suburban Landscape Unit. A minimum of thirty of feet setback from the edge of shoulder is required for tree planting on State right-of-way, per *Plant Setback Spacing Guide* (California Department of Transportation, January 1998).

View From the Freeway. Figures 4.13-3 & 4.13-4 contain photos of both existing conditions and proposed simulations of how the View From the Freeway would appear under the (Enhanced) Reduced Build Alternative. These photos are further studies of the View From the Freeway, which include various locations along the corridor. The simulation in Figure 4.13-2 is representative of the type of impacts that would occur throughout the (Enhanced) Reduced Build Alternative, with frequent removal of landscaping and additional pavement. Thus, this type of high and adverse visual impact would be common throughout the corridor. The loss of landscaping is further discussed in Section 4.13-5 of the DEIR/EIS of August 2001.

Existing Suburban Landscape Units:

Figure 4.13-1
These images represent the suburban landscape throughout the project area.

Image Perspectives:

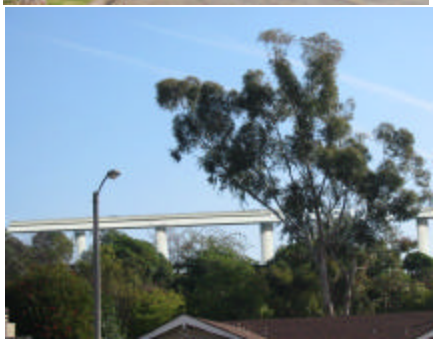
1. College Park Drive: East view
2. Yale Lane: East view
3. Harvard Lane: East view
4. College Park Drive: East View
5. Harvard Lane: North view
6. Yale Lane: North view
7. Pearce Street Overcrossing: view from Flagstone Place
8. Pearce Street Overcrossing: view from Pearce Street

SR-22 / West Orange County Connection Project

Proposed Suburban Key Views: (Enhanced) Reduce Build Alternative- Figure 4.13-2

These images represent the new views from the residential neighborhood. The views below are taken on College Park Drive, looking north.

Existing **Proposed**



Existing **Proposed**

SR-22 / West Orange County Connection Project

Existing Views From The Freeway:
Figure 4.13-3
These images represent views along the Mainline of SR-22.

SR-22 / West Orange County Connection Project

Views From the Freeway: Proposed (Enhanced) Reduced Build Alternative: Figure 4.13-4
These images depict areas along the Mainline after construction.

Existing **Proposed**




Existing **Proposed**

SR-22 / West Orange County Connection Project

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative assumes that no improvements would be made to the existing area beyond those already planned and approved. No additional impacts at key viewpoints would occur.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would not include any major capital improvements at the key viewpoints. Negligible impacts at key viewpoints would occur.

3. FULL BUILD ALTERNATIVE

Suburban Landscape Unit. The Suburban Key Viewpoint exemplifies one of the most adverse visual impacts that would result from implementation of the Full Build Alternative. With the loss of homes and landscaping and the new direct views of freeway elements, vividness, intactness, and unity would be dramatically affected at this key viewpoint. Overall, visual quality would drop

from moderately high to low, a high level of adverse visual quality change. A full discussion of the visual impacts is in Section 4.13 of the DEIR/EIS, August 2001.

Open Landscape Unit. At the Open Key Viewpoint, physical changes after construction would include widening of the bridge and freeway, moving it closer to the viewer, removal of buildings on the far side of the Santa Ana River near the freeway, and removal of the billboard in this same location. These changes would result from the realignment and widening of the Bristol Street/La Veta Avenue off-ramp and the eastbound SR-22 connector to southbound I-5.

View from the Freeway The impacts to the View From the Freeway in the Full Build Alternative are the same as those of the (Enhanced) Reduced Build Alternative.

Thresholds of Significance for CEQA:

- Reduction of visual quality in residential neighborhoods from home loss and landscaping.

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

With the (Enhanced) Reduced Build Alternative, which was developed to reduce impacts related to the removal of houses and landscaping, there would be relatively few areas where the visual impacts would significantly lower the visual quality in these residential neighborhoods. It is anticipated that the visual impacts to residential neighborhoods would be less than significant with proper mitigation and sufficient right-of-way.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impacts at key viewpoints.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would not include any major capital improvements at the key viewpoints. No significant impacts at key viewpoints are anticipated to occur.

3. FULL BUILD ALTERNATIVE

With the loss of homes, landscaping and the new direct views of freeway elements, visual quality would be dramatically affected in residential neighborhoods. It is anticipated that there would be potentially significant impacts to visual quality in residential neighborhoods.

4.13.2 New Public Views

If a project provides access – physically or visually – to new areas, new public views are created. The potential for new views is provided below.

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

The (Enhanced) Reduced Build Alternative includes primarily highway widening and alteration of existing interchanges. Some examples of new public views that may be created include the proposed I-405/I-605 HOV connector, the I-405/SR-22 HOV connector, the proposed soundwalls along the SR-22 corridor, and greater visibility of existing commercial businesses. These new views are from the freeway as well as of the freeway. Some of these views are anticipated to be potentially significant without proper mitigation.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative does not include construction other than that addressed in previous environmental documents. No new views would be created.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would not create new views.

3. FULL BUILD ALTERNATIVE

New views would be provided for motorists using the arterial in the former Pacific Electric right-of-way. Currently, this right-of-way is not generally open to the public, and is often located at the back of parcels not visible to the public. From the new arterial, especially at locations where it is elevated, motorists would have a view of a variety of adjacent land uses. Much of the surrounding area is industrial and the views in this area would be mostly of the backs of these industrial properties. The view would also include the Willowick Golf Course and the Santa Ana River. In some areas, noise barriers would block views of the surrounding land uses.

Thresholds of Significance for CEQA:

- Reduction of visual quality related to views of the freeway
- Visual quality of the proposed I-405/I-605 direct HOV connector
- Reduction of visual quality related to views from the freeway

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

New views would be created due to the construction of sound barriers that will alter the views of drivers traveling on the freeway and will also create new views of the freeway for the public. The proposed HOV connectors at I-405/I-605 and at I-405/SR-22 will create new views from the freeway. The impacts may include new views from the freeway, the view of the HOV structure, and the limited views due to new soundwalls. The new views related to the (Enhanced) Reduced Build Alternative are anticipated to be significant without proper mitigation.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impacts to views of or from the freeway.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would have no significant impacts to views of or from the freeway.

3. FULL BUILD ALTERNATIVE

New views that are not currently visible to the public would be created throughout the proposed arterial on the former Pacific Electric right-of-way. Motorists would have a new view of the backs of parcels and a variety of adjacent land uses. The new views related to the Full Build Alternative are anticipated to be significant.

Impacts of the I-405/I-605 and I-405/SR-22 direct HOV connectors are the same as those of the (Enhanced) Reduced Build alternative.

4.13.3 Visual Impacts at Important Visual Resources

Important visual resources include areas where the visual environment is particularly important to the function of the land use. In the SR-22/West Orange County Connection study area, these include parks, recreational areas, trails and historic properties.

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Table 4.13-1 lists the important visual resources where physical changes under the (Enhanced) Reduced Build Alternative would result in substantial visual impacts. As shown in the table, the result of the implementation of this alternative would be a decrease in visual quality at three of these resources. The DEIR/EIS originally indicated four resources; however, due to refined engineering, one resource (Almond Park) was avoided. At Garden Grove Park and Bolsa Grande High School, the removal of mature screening vegetation and its replacement with noise barriers would represent a substantial and adverse visual impact. The Santa Ana River Trail would be interrupted in up to two locations if grade-separated crossings were not provided. This impact would also affect the trail's use; the impact has been avoided with mitigation. (See Sections 4.10, 4.13, and 9.0.)

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative does not include construction other than that addressed in previous environmental documents. There would be no impacts to important visual resources.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would not include construction in the vicinity of important visual resources. There would be no impacts to important visual resources.

3. FULL BUILD ALTERNATIVE

Table 4.13-2, Impacts to Important Visual Resources, shows where physical changes under the Full Build Alternative would result in substantial visual impacts. As shown in the table, the result of the implementation of this alternative would be a decrease in visual quality at seven of these resources and the elimination of two others. Almond Park has been removed from this table due to refined engineering subsequent of the DEIR/EIS.

Thresholds of Significance for CEQA:

- Impacts to the continuity of trails

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

The Santa Ana River Trail would be affected, interrupted in up to two locations if grade-separated crossings were not provided. This impact would also significantly affect the trail's use. Mitigation measures would reduce impacts to the trail to less than significant (see VIS-(E) RB-6).

Table 4.13-1
IMPACTS TO IMPORTANT VISUAL RESOURCES
(ENHANCED) REDUCED ALTERNATIVE

Important Visual Resource	Existing Visual Quality	Description of Visible Changes	Proposed Visual Quality
Parks			
Garden Grove Park	High	Removal of screening vegetation, including mature trees, to accommodate widening of SR-22; replacement with noise barrier, introducing a hard surface in place of landscaping.	Moderate
Trails			
Santa Ana River Trail	High	Widening of SR-22 overcrossing of trail. Two new structures crossing (and possibly interrupting) trail north of SR-22 (I-5/SR-57 connector to SR-22 and SR-57 to Metropolitan Drive off-ramp) – possibly interrupting trail.	If interrupted, low; also would impact use
Other Recreational Facilities			
Bolsa Grande High School	High	Removal of screening vegetation, including mature trees, to accommodate widening of SR-22; replacement with noise barrier, introducing a hard surface in place of landscaping.	Moderate

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impact to trails.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would have no significant impacts to trails.

3. FULL BUILD ALTERNATIVE

Trails would be affected in two locations. The Santa Ana River Trail would be interrupted in up to three locations if grade-separated crossings were not provided. The proposed Pacific Electric Trail would be precluded completely. Both of these impacts would be significant not just to their visual quality but also to their utility. However, if mitigation were implemented for the Santa Ana River Trail, the impacts to this resource would be less that significant (see VIS-FB-8).

Table 4.13-2
IMPACTS TO IMPORTANT VISUAL RESOURCES
FULL BUILD ALTERNATIVE

Important Visual Resource	Existing Visual Quality	Description of Visible Changes	Proposed Visual Quality
Parks			
Garden Grove Park	High	Removal of screening vegetation, including mature trees, to accommodate widening of SR-22; replacement with noise barrier, introducing a hard surface in place of landscaping.	Moderate
Eldridge Park	High	Removal of houses, with one across the street from the park, to accommodate realigned frontage road; resulting open space would be visible and might not be maintained.	Moderately high
Trails			
Santa Ana River Trail	High	Widening of SR-22 overcrossing of trail. Two new structures crossing (and potentially interrupting) trail north of SR-22 (I-5/SR-57 connector to SR-22 and SR-57 to Metropolitan Drive off-ramp) – potentially interrupting trail. New structure crossing (and potentially interrupting) trail for Pacific Electric Arterial. Removal of businesses and billboards visible from trail.	If interrupted, low; also would impact use
Pacific Electric Trail *(proposed)*	Moderate	Total displacement of proposed trail by Pacific Electric Arterial.	Not applicable; resource precluded
Other Recreational Facilities			
Bolsa Grande High School	High	Removal of screening vegetation, including mature trees, to accommodate widening of SR-22; replacement with noise barrier, introducing a hard surface in place of landscaping.	Moderate
Pacific Electric Railway Commemorative Area	Moderate	Removal of large amount of screening vegetation for widening of SR-22 and for Pacific Electric Arterial on-ramp.	Moderately low
Willowick Municipal Golf Course	High	New Pacific Electric Arterial in open space corridor adjacent to golf course; probably requirement for protective fencing to prevent wayward golf balls from landing in adjacent arterial; arterial would be elevated near eastern end of golf course.	Moderately high
Spurgeon Intermediate School	Moderate	New elevated Pacific Electric Arterial and Civic Center Drive off-ramp in open space corridor adjacent to school play areas; interrupting of view to additional agricultural open space north of right-of-way.	Moderately low
Cultural Resources			
Pacific Electric Santa Ana River Bridge	Moderately high	Removal of bridge.	Moderately high

Table 4.13-3
VISUAL POLICY DOCUMENTS APPLICABLE TO THE VIEWSHED

Agency	Documents
Orange County	• *Master Plan of Freeway and Transit Corridor Enhancements* (December 1995) • *Orange County Commuter Bikeways Strategic Plan* (May 1995) • *Resources Element of the Orange County General Plan* (April 1994)
Los Alamitos	• *Los Alamitos General Plan* (1980)
Seal Beach	• *Seal Beach General Plan – Scenic Highways Element* (1975) • *Seal Beach General Plan – Open Space/Recreation/Conservation Element* (October 1997)
Westminster	• *1996 General Plan* (March 1996)
Garden Grove	• *City of Garden Grove General Plan* (October 1995) • *Harbor Corridor Specific Plan* (April 1990)
Santa Ana	• *Revised Draft Urban Design Element of the Santa Ana General Plan* (June 1998) • *Circulation Element of the Santa Ana General Plan* (February 1998) • *Final North Harbor Specific Plan* (1992)
Orange (City)	• *City of Orange General Plan* (August 1989) • *The City Center Mills Specific Plan* (1996)
Tustin	• *Tustin General Plan* (February 1994)
Caltrans	• *Project Development Procedures Manual,* Chapter 29, Landscape Architecture (updates through June 3, 2000) • *Plant Setback Spacing Guide* (updates through June 3, 2000) • *Highway Design Manual,* Chapter 900, Landscape Architecture (updates through June 3, 2000

4.13.4 Visual Policy Document Consistency

Policy documents of the seven cities and the County of Orange within the SR-22/West Orange County Connection viewshed include areas classified as scenic resources, visual resources, aesthetic assets, open space and other similar designations.[1] In addition, various local jurisdictions as well as the Department have policies about visual quality in the viewshed. These policies are too numerous to list here, but the policy documents are listed in Table 4.13-3 and the discussions that follow identify any conflict with policies within these documents. (All of the policies are discussed in the *SR-22/West Orange County Connection Visual Impact Assessment* in Appendix K of the DEIR/EIS, August 2001). There are no scenic highways identified by the state in the viewshed.

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Table 4.13-4 lists the physical changes that would occur under the (Enhanced) Reduced Build Alternative at the visual resources identified in applicable policy documents. As shown in the table, the result of the implementation of this alternative would be a decrease in visual quality at two of these resources. Although not reflected in the table, the (Enhanced) Reduced Build Alternative would remove less landscaping than the Full Build Alternative would. Regarding landscaping, this alternative, like the Full Build Alternative, would be incompatible with the Department policies. In addition to the visual resources identified in the policy documents applicable to the viewshed, the (Enhanced) Reduced Build Alternative would not be compatible with several other policies related to visual quality. These documents are fully described in the DEIR/EIS of August 2001, Section 4.13.

- Bikeways (*Orange County Commuter Bikeways Strategic Plan*);
- Local Review of Designs (*City of Garden Grove General Plan*);
- Freeway Landscaping (*City of Garden Grove General Plan*, *Revised Draft Urban Design Element of the Santa Ana General Plan,* and *City of Orange General Plan*);
- Visual Enhancement (*City of Garden Grove General Plan* and *Revised Draft Urban Design Element of the Santa Ana General Plan*);
- Freeway On- and Off-Ramps (*Revised Draft Urban Design Element of the Santa Ana General Plan*);

[1] Local policy documents cited herein are available at OCTA.

Table 4.13-4
IMPACTS TO VISUAL RESOURCES IDENTIFIED IN POLICY DOCUMENTS
(ENHANCED) REDUCED BUILD ALTERNATIVE

Visual Resource	Existing Visual Quality	Description of Visible Changes	Proposed Visual Quality
Seal Beach Boulevard (Seal Beach)	Moderately high	I-405 overpass would be rebuilt; removal of some landscaping at the I-405 interchange.	Moderate
SR-22 (Garden Grove Freeway) (Garden Grove)	Low to moderately high	Removal of much of the landscaping along the freeway to allow widening; noise barriers in some areas.	Very low to moderate

- See Section 4.13 of the DEIR/EIS of August 2001 for a discussion of The *Project Development Procedures Manual,* the Department *Plant Setback and Spacing Guide,* and the Department's *Highway Design Manual* in greater detail.

The (Enhanced) Reduced Build Alternative would remove a large amount of freeway landscaping (though slightly less than the Full Build Alternative), and in many cases there would be little space available for replacement landscaping, either within the right-of-way or in the adjacent densely developed properties. Thus, it is unlikely that all of the recommendations of the Department policy documents can be fulfilled within the design of the (Enhanced) Reduced Build Alternative, rendering it incompatible with many of the Department's freeway landscaping policies.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative does not include construction other than that addressed in previous environmental documents. There would be no impacts to visual resources identified in policy documents. Because there would be no changes to SR-22, there would also be no opportunity to enhance the freeway, as called for in several policy documents, including the Orange County *Master Plan of Freeway and Transit Corridor Enhancements,* the *City of Garden Grove General Plan,* the *Revised Draft Urban Design Element of the Santa Ana General Plan,* and the *City of Orange General Plan.*

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would not include construction in the vicinity of visual resources identified in policy documents. There would be no impacts to visual resources identified in policy documents. Because there would be no changes to the SR-22, there would also be no opportunity to enhance the freeway, as called for in several policy documents, including the Orange County *Master Plan of Freeway and Transit Corridor Enhancements,* the *City of Garden Grove General Plan,* the *Revised Draft Urban Design Element of the Santa Ana General Plan,* and the *City of Orange General Plan.*

3. FULL BUILD ALTERNATIVE

Table 4.13-5 lists the physical changes that would occur under the Full Build Alternative at the visual resources identified in applicable policy documents. As shown in the table, the result of the implementation of this alternative has been revised from the DEIR/EIS and would be a decrease in visual quality at three of these resources.

Table 4.13-5
IMPACTS TO VISUAL RESOURCES IDENTIFIED IN POLICY DOCUMENTS
FULL BUILD ALTERNATIVE

Visual Resource	Existing Visual Quality	Description of Visible Changes	Proposed Visual Quality
Seal Beach Blvd. (Seal Beach)	Moderately high	I-405 overpass would be rebuilt; removal of some landscaping at the I-405 interchange.	Moderate
SR-22 (Garden Grove Freeway) (Garden Grove)	Low to moderately high	Removal of much of the landscaping along the freeway to allow widening; noise barriers in some areas.	Very low to moderate
Willowick Municipal Golf Course (Santa Ana)	High	New Pacific Electric Arterial in open space corridor adjacent to golf course; probable requirement for protective fencing to prevent wayward golf balls from landing in adjacent arterial; arterial would be elevated near eastern end of golf course.	Moderately high

In addition to the visual resources identified in the policy documents applicable to the viewshed, the Full Build Alternative would not be compatible with several other policies related to visual quality (listed above under the A. (Enhanced) Reduced Build Alternative).

The Full Build Alternative would remove a large amount of freeway landscaping, and in many cases there would be little space available for replacement landscaping, either within the right-of-way or in the adjacent densely developed properties; therefore, it is unlikely that all of the recommendations of the Department's policy documents can be fulfilled within the design of the Full Build Alternative. Thus, this alternative would be incompatible with many of the Department's freeway landscaping policies outlined in the discussion of the (Enhanced) Reduced Build Alternative, above.

If the Full Build Alternative were not to include the appropriate *North Harbor Specific Plan* guidelines in the design of the Pacific Electric Arterial, it would not be compatible with the policies contained therein. Without enhancement and streetscapes described in the *Urban Design Element* included in the project design, this alternative would also be incompatible with the urban design policies (See Section 4.13 of the DEIR/EIS of August 2001 for the details of these planning documents). Because the Full Build Alternative would remove the historic Pacific Electric Santa Ana River Bridge, it would be incompatible with the policy related to preserving such views.

The Pacific Electric Arterial would represent a new gateway into Santa Ana, a direct link between the heart of the city and points west. Without the inclusion of unique and distinctive streetscaping in the design of the arterial, the Full Build Alternative would be incompatible with the City's policy related to gateways.

Thresholds of Significance for CEQA:

- Potential conflict with Orange County's Master Plan of Freeway and Transit Corridor Enhancements
- Inconsistency with Department's visual policy

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Landscaping would be greatly reduced along the entire SR-22 freeway. In addition to the visual resources identified in the policy documents applicable to the viewshed, the (Enhanced) Reduced Build Alternative would not be compatible with several other policies related to visual quality. With mitigation measures applied, it is anticipated that impacts to visual quality as they relate to plans and policies would be less than significant (see VIS-(E)RB -5, VIS-(E)RB -7, VIS-(E)RB-10, VIS-(E)RB-11).

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impact on consistency with plans or policies.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would have no significant impact on consistency with plans or policies.

3. FULL BUILD ALTERNATIVE

Landscaping would be greatly reduced along the entire SR-22 freeway. In addition to the visual resources identified in the policy documents applicable to the viewshed, the Full Build Alternative would not be compatible with several policies related to visual quality. After mitigation measures are implemented, it is anticipated that impacts to visual quality as they relate to plans and policies would be less that significant (see VIS-FB-3, VIS-FB-5, VIS-FB-9, and VIS-FB-10, VIS-FB-11, VIS-FB-13, VIS-FB-16 in the DEIR/EIS of August 2001).

4.13.5 Impacts to Freeway Landscaping

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

In order to widen or realign the freeways within the SR-22/West Orange County Connection viewshed or to make improvements to interchanges, existing landscaping would need to be removed. The (Enhanced) Reduced Build Alternative would remove approximately 90 hectares (220 acres) or about 60 percent of the existing landscaping within the viewshed. (Note: This is slightly less than the 66 percent of the landscaping removed by the Full Build Alternative. Many of the elements that are not part of the (Enhanced) Reduced Build Alternative are located within areas with very little landscaping, such as the former Pacific Electric right-of-way, the I-5/SR-22 interchange, and SR-55. Thus, the impacts to freeway landscaping under the (Enhanced) Reduced Build Alternative would not be much different from under the Full Build Alternative.) In many areas, such as through much of Garden Grove, almost all of the landscaping would be removed under the (Enhanced) Reduced Build Alternative, except at interchanges. Where the freeway would be elevated and noise barriers would be constructed, the noise barriers would be placed at the edge of the freeway shoulder, since placement further away from the shoulder (and necessarily further down the embankment) would eliminate or reduce the noise-abating qualities of the noise barrier. In these areas, there would be no area to replant (except for outside the freeway). Figure 4.13-2 shows that the views from the freeway will be impacted. Along I-605 and I-405, the existing landscaping is not as dense because of past improvements that removed the planting.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative does not include construction other than that addressed in previous environmental documents. There would be no impacts to freeway landscaping.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would include only minor construction. Therefore, no impacts to freeway landscaping would occur.

3. FULL BUILD ALTERNATIVE

See the discussion under A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE, above. The Full Build alternative would remove approximately 100 hectares (250 acres) or about 66 percent of the existing landscaping within the viewshed.

The former Pacific Electric right-of-way is vegetated mostly with grasses and small plants. The Full Build Alternative would remove these plants, but it would result in negligible visual impact.

Thresholds of Significance for CEQA:

- Loss of freeway landscaping
- Replacement of landscaping with hard surfaces such as soundwalls and structures

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Widening and realignment of SR-22 would require the removal of approximately 60 percent of existing vegetation. In areas where the freeway would be elevated and noise barriers would be constructed, there would be minimal replanting. Impacts to freeway vegetation are potentially significant for the (Enhanced) Reduced Build Alternative.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

Under the No Build Alternative, there would be no loss or replacement of landscaping. Therefore, impacts to freeway landscaping under the No Build Alternative would not be significant.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would include only minor construction. It is anticipated that impacts to freeway landscaping would not be significant.

3. FULL BUILD ALTERNATIVE

See comments under A. (Enhanced) Reduced Build Alternative for Thresholds of Significance for the Full Build Alternative

4.13.6 Impacts to Freeway-Oriented Signage

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

The (Enhanced) Reduced Build Alternative would include widening of existing roadways or realignment of interchanges. Although the DEIR/EIS proposed that five signs oriented to viewers on the freeways would be removed, further studies and refined engineering have determined that sign removal would not be necessary.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative does not include construction other than that addressed in previous environmental documents. There would be no impacts to freeway-oriented signage.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative does not include right-of-way changes. There would be no impacts to freeway-oriented signage.

3. FULL BUILD ALTERNATIVE

Impacts of freeway-oriented signage are the same as those of the (Enhanced) Reduced Build Alternative.

Thresholds of Significance for CEQA:

- Proposed project's impact on freeway signage

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

The (Enhanced) Reduced Alternative would have no significant impacts to freeway-oriented signage.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impacts to freeway-oriented signage.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative does not include right-of-way changes. There would be no significant impacts to freeway-oriented signage.

3. FULL BUILD ALTERNATIVE

The Full Build Alternative would have no significant impacts to freeway-oriented signage.

4.13.7 Impacts Related to Shade, Shadow, Light and Glare

Shade is defined as an area blocked from direct sunlight for at least several hours during the day. Construction or removal of large structures can result in changes in shade patterns, which can affect the visual environment both directly (the visual environment is darker or brighter) or indirectly (the darker/brighter environment changes landscape viability). Shadows are more temporary shade features created by smaller structures. Shadows do not typically result in indirect impacts to vegetation; their impact is generally minimal unless the structure creates an unusual or disruptive shadow pattern.

Light impacts occur when there are new sources of light (such as new streetlights) or when existing lights are removed. Glare impacts occur when light is directed from the light source directly into the eyes of viewers, either directly from the source (such as headlights) or by reflection (such as sunlight reflected from a “glass box”-type building).

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Shade. The (Enhanced) Reduced Build Alternative would slightly increase the areas shaded by overhead structures because some of these structures would be widened or there would be new overhead structures. The areas that would be visually impacted by shade are the new HOV connec-

tors between I-405/I-605 and I-405/SR-22, and the Santa Ana River crossings where the SR-22 mainline bridge would be widened. This impact would affect the motorists using the freeway and the connectors crossing above them, and the recreational users of the trail. A bridge proposed as a connector from the southbound SR-57 to the westbound SR-22 will not dramatically change shade impacts within the surrounding area.

Shadow. The (Enhanced) Reduced Build Alternative would create no unusual or disruptive shadow patterns. The overhead HOV connectors would cast new shadows but this would only add to the existing shadows cast by the existing structures.

Light. New light sources would be minimal for the (Enhanced) Reduced Build Alternative. Although new streetlights will be added to the I-405/I-605 HOV connector as well as the entire SR-22 corridor, the new light source will not be significant but only supplement the existing street lights.

Glare. There would be no impact associated with glare from the (Enhanced) Reduced Build Alternative. The alignment would be generally straight or gently curving, resulting in headlight paths that would be contained within the right-of-way. The (Enhanced) Reduced Build Alternative would not include reflective elements and would not locate facilities in new areas affected by glare.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would include only minor construction. There would be no impacts related to shade, shadow, light or glare.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

The TSM/Expanded Bus Service Alternative would include only minor construction. There would be no impacts related to shade, shadow, light or glare.

3. FULL BUILD ALTERNATIVE

Shade. The Full Build Alternative would slightly increase the areas shaded by overhead structures because some of these structures would be widened or there would be new overhead structures. The visual impacts of shade are the same as for the (Enhanced) Reduce Build Alternative.

Shadow. The Full Build Alternative would create no unusual or disruptive shadow patterns.

Light. New light sources would be minimal for the Full Build Alternative with the exception of the vicinity of the Pacific Electric Arterial and the HOV connectors. At the Pacific Electric Arterial location, most of the empty right-of-way is currently unlit. New streetlights would be installed along the arterial. Although much of the right-of-way is bordered by industrial uses or by areas primarily used during the day (such as the golf course and intermediate school), there are some homes and mobile homes bordering the alignment that would be affected by the new light levels. For the area near the proposed I-405/I-605 and I-405/SR-22 HOV connectors, the addition of streetlights would cause the same impacts as the (Enhanced) Reduce Build Alternative.

Glare. There would be no impact associated with glare from the Full Build Alternative. The alignment, especially along the HOV connectors, would be generally straight or gently curving, resulting in headlight paths that would be contained within the right-of-way. Even on the Pacific Electric Arterial, headlight glare would not be an issue because of the lack of turning movements (vehicles cannot turn onto or off of the arterial except on existing streets at the eastern terminus). The Full Build Alternative would not include reflective elements nor locate facilities in new areas affected by glare.

Thresholds of Significance for CEQA:

- New light sources or light levels
- New sources of shade and shadow

CEQA Findings:

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

This alternative would have less than significant impacts related to light sources and light levels since such sources would be minimal. This is because the new streetlights are complementing the existing lights along the corridor and no new light sources will be created. There are no significant impacts related to shade and shadow in this alternative. The proposed overhead HOV connectors would slightly increase the shaded areas underneath. The proposed construction will be in areas where overhead bridges exist, thereby causing minimal disturbance to the area.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

The No Build Alternative would have no significant impacts related to light.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

There is only minor construction associated with the TSM/Expanded Bus Service Alternative; therefore, there would be no significant impacts related to light.

3. FULL BUILD ALTERNATIVE

New sources of light and new sources of shade and shadow would occur along the former Pacific-Electric right-of-way and the new overhead structures would slightly increase the amount of shade. Impacts associated with the addition of light sources are expected to be significant.

4.13.8 Mitigation

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

It is advisable that an aesthetic committee be formulated at the beginning of the design phase to ensure that mitigation measures are in the best interest of the members of the communities. The committee members may include local agencies, OCTA, the Department, and community members who live and work along the corridor. The mitigation measures identified must follow the policies as shown on Table 4.13-3 as well as the Department's landscape standards and planting setback guidelines.

VIS-(E)RB-1. At locations where residential structures are removed and neighboring residences and/or parks are exposed to new views of the freeways or freeway structures, or intactness of the neighborhood is affected, additional landscaping will be provided within the right-of-way or in remnant parcels remaining after acquisition of the homes. This landscaping could be designed to provide a transition between the residential level of landscaping and the freeway, and to create a buffer between the freeway and the residences, not necessarily completely screening the freeway from view. All features of the residential community that can be retained, especially sidewalks and street trees, will be retained.

VIS-(E)RB-2. As much as possible, existing landscaping within the state right-of-way will be preserved. Areas needed for construction will be minimized where feasible while maintaining safety for construction workers and the public.

VIS-(E)RB-3. Where freeway landscaping is removed due to the widening of the freeway or the realignment of ramps, and where enough right-of-way is available, replacement landscaping will be provided at a minimum of one-to-one ratio. If necessary, available areas outside the state right-of-way could be used for replacement landscaping, if long-term maintenance by the local community can be assured. Replacement planting shall be provided with sufficient irrigation and maintenance to ensure survival.

VIS-(E)RB-4. Noise barriers and other large structures shall be visually softened through the use of vines, at a minimum, with shrubs and trees used where sufficient right-of-way exists. This planting will be used to reduce the visual impact for both the viewers on the outside of the noise barriers (adjacent land uses) and viewers on the freeways/arterial. Where there is no room for landscaping because the barrier is placed at the edge of shoulder but there is available land on the outside of the barrier, vines will be planted behind the barrier and trained to spill over the top. Enhanced noise barrier design such as bas-relief designs could be used, similar to those existing along SR-22 and SR-55 in the project study area. Graffiti-resistant surfaces shall be used.

VIS-(E)RB-5. California native wildflowers will be included at a minimum level of 0.25 percent of total planting and irrigation budget.

VIS-(E)RB-6. For any new or widened crossings of the Santa Ana River trail, grade separations shall be provided in order to maintain the trail's continuity.

VIS-(E)RB-7. The project designers shall work with the Deparment and the local governments to provide freeway landscaping consistent with local policies, and to integrate the facility with adjacent communities, where feasible. Cooperative agreements shall be executed for any funding, installation and maintenance of this landscaping.

VIS-(E)RB-8. Where possible, views of the freeway and associated elements, including noise barriers, shall be buffered from homes, schools, parks and similar uses by planting.

VIS-(E)RB-9. Where possible, objectionable views from the freeway, such as of open storage for industrial uses, shall be screened from view by use of highway planting. Replacement planting outside the right-of-way could be used for this purpose if maintenance by local communities or landowners can be assured.

VIS-(E)RB-10. Highway planting shall be appropriately scaled and oriented to the freeway viewer.

VIS-(E)RB-11. Highway planting should be selected based on maximum benefit for the long-term costs involved. Plant materials that can withstand the difficult roadside conditions and survive with limited irrigation and minimal maintenance should be used. Use of native California plants is encouraged; invasive species shall be avoided. Other considerations recommended in the *Highway Design Manual*[2] will be incorporated into designs, including avoidance of brittle trees, monocultures, edible plants and poisonous plants.

VIS-(E)RB-12. Highway planting near the I-405/I-605 interchange will be chosen to reduce the visibility of the existing structures through the use of tall, fast growing trees or shrubs. Where possible, provide trees near the existing soundwall to create a buffer between the highway and the residential community. The intent of this type of mitigation is to visually screen the existing two structures with plant material, thereby creating only one visible overhead structure.

[2] Available at Caltrans, District 12.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

None required.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

None required.

3. FULL BUILD ALTERNATIVE

The Mitigation Measures for the Full Build Alternative are listed in the DEIR/EIS of August 2001.

4.13.9 Residual Impacts After Mitigation

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

Fewer houses would be removed under the (Enhanced) Reduced Build Alternative than with the Full Build Alternative, but impacts related to the visual disruption of neighborhoods would occur in some locations, particularly at the I-405/I-605 connector. Until the plant material reaches maturity, the residual visual impact would be views of the freeway. However, once the plants fill in and mature, the visual impacts would be less than significant in this area.

The removal of landscaping for widening the freeway Mainline and realignment of interchanges cannot be fully mitigated due to the lack of available area for replanting either within or outside the future right-of-way and the addition of soundwalls. The loss of landscaping would be a substantial visual impact.

B. OTHER ALTERNATIVES

1. NO BUILD ALTERNATIVE

None.

2. TSM/EXPANDED BUS SERVICE ALTERNATIVE

None.

3. FULL BUILD ALTERNATIVE

In locations where houses are removed, the visual impact to the remaining residential viewers cannot be fully mitigated and a residual visual impact would remain. Figure 4.13-7 in the DEIR/EIS of August 2001 illustrates the Suburban Key Viewpoint after mitigation.

The removal of landscaping for widening of the freeways and realignment of interchanges cannot be fully mitigated due to the lack of available area for replanting either within or outside the future right-of-way. The loss of landscaping would be a substantial visual impact. Figure 4.13-6 illustrates the View From the Freeway after mitigation.

The preclusion of the proposed class I trail in the former Pacific Electric right-of-way would be a impact that cannot be mitigated (see Sections 4.10 and 9.0). Use of the right-of-way would also lead to the following visual impacts that also cannot be reduced to less than substantial after mitigation: the removal of open space, the addition of new light sources, and the removal of the historic Pacific Electric Santa Ana River Bridge.

The addition of elevated connectors to and from the Pacific Electric Arterial would also result in blockage of views of signs that cannot be mitigated, at the following businesses: the Shell Gas Station, Garden Grove Storage, and Allspace Storage.

For additional information, see Sections 4.10, 4.13 and 9.0 of the DEIR/EIS of August 2001 for a discussion of residual impacts after mitigation for the Full Build Alternative.